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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,805	10/23/2000	Jae-Hong Park	A33640	2797
21003	7590	02/17/2004	EXAMINER	
			MATTIS, JASON E	
			ART UNIT	PAPER NUMBER
			2665	8
DATE MAILED: 02/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/694,805	PARK ET AL.	
	Examiner	Art Unit	
	Jason E Mattis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10/23/00.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5, 6, 7</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 3 and 10 objected to because of the following informalities: Both claims include the terms "the common code", "the zero offset", "the long code state", and "the synchronous channel super from timing". All of these terms lack antecedent basis in both claim 3 and claim 1, which claim 3 depends on. It is recommended that these terms be changed to "a common code", "a zero offset", "a long code state", and "a synchronous channel super from timing".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 5, 6, 12, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. **With respect to claims 5, 6, 12, and 13,** step d22) of each of these claims states, "storing one period of the common channel". It is not understood what is meant by "storing one period of the common channel", since it is not possible to store a channel. It is recommended that "storing one period of the common channel" be changed to "storing one period of the common code" for step d22) in each of claims 5, 6, 12, and 13. **With respect to claims 5 and 12,** claims 5 and 12

each state the limitations “accumulating an output value of the common channel at every period, thereby generating accumulated values” and “selecting a maximum value of the accumulated value”. It is not understood from either the claims or the specification what “an output value” and “the accumulated value” are and where they are derived from. For example, it is not clear if these values are Walsh code values, if they are values of the pilot signal, if they are values of the zero offset, etc. It is also not understood from the specification or the claims how these values are accumulated, for example, added, multiplied, etc. A further explanation of the “output values” and “accumulated values” is needed. **With respect to claims 6 and 14**, claims 6 and 14 each state the limitation “calculating output values of the common channel at every period” and “selecting the most frequent output value”. It is not understood from either the claims or the specification what “output values” and “the most frequent output value” are. For example, it is not clear if these values are Walsh code values, if they are values of the pilot signal, if they are values of the zero offset, etc. It is also not understood from the specification or the claims how these values calculated. A further explanation of the “output values” and “the most frequent output value” is needed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (UK Patent Publication 2 297 460) in view of Hiroshi (European Patent Publication 0 949 835).

With respect to claims 1 and 8, Whinnett et al. discloses a method for performing handoff from an asynchronous base station, a first flexible time domain system, to a synchronous base station, a second time domain system (**See page 4 lines 11-15 and Figure 3 of Whinnett et al. for reference to a handoff between a first flexible time domain and a second time domain system, where the first system is a CDMA system and the second system is a TDMA system in one embodiment**). Whinnett et al. also discloses setting a common channel between the synchronous base station, the TDMA BS (BS2), and the mobile station, MS (**See page 6 lines 16-18 of Whinnett et al. for reference to establishing a communications link between the MS and the TDMA BS (BS2)**). Whinnett et al. further discloses requesting a handoff to the synchronous base station, of the TDMA system (**See page 4 lines 18-21 and item 104 in Figure 3 Whinnett et al. for reference to the MS requesting a handoff to a base station of the TDMA system**). Whinnett et al. also discloses receiving a compressed message, by operating in the time adjusted mode, through the common channel (**See page 4 lines 22-27 and item 110 in Figure 3 of Whinnett et al. for reference to receiving messages from the CDMA and TDMA systems while operating in a time adjusted mode**). Whinnett et al. further discloses selecting a synchronous base station, of the TDMA system, to be handed off based on the compressed message, while operating in a time adjusted mode, and performing the

handoff (**See page 4 lines 27-34 and item 114 in Figure 3 of Whinnett et al. for reference to handing off to a base station of the TDMA system based on signaling in the TDMA channel and for reference to performing the handoff by transferring the call to the TDMA system**). Whinnett et al. does not disclose determining whether there is an asynchronous base station to be handed off in neighbor asynchronous base stations based on monitoring information of the neighbor asynchronous base stations.

Hiroshi, in the field of communications, discloses a method for handoff between a CDMA and another cellular system, which includes a step for determining whether there is an asynchronous base station, of a CDMA system, to be handed off in neighbor asynchronous base stations based on monitoring information of the neighbor asynchronous base stations (**See column 1 paragraphs 3-4 of Hiroshi for reference to only performing handoff from a CDMA to another system if there is no candidate base station to handoff to in the CDMA system**). Only handing off from a CDMA base station to a base station of another system when there is no candidate base station for the handoff in the CDMA system has the advantage of making sure that an intersystem handoff is performed only when needed (**See page 1 paragraph 5 of Hiroshi for reference to the fact that this is desirable because it is impossible to hand off back to another CDMA base station, even if one is available, after handing off to an analog base station**).

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Hiroshi, to combine the method of only handing off to another system when there is no CDMA base station to hand off to with

the handoff method of Whinnett, with the motivation being to make sure that an intersystem handoff is performed only when needed.

5. Claims 2, 3, 4, 9, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. in view of Hiroshi as applied to claims 1 and 8 above, and in further view of the applicant's discussion of Prior Art of the Invention.

With respect to claims 2, 3, 4, 9, 10, and 11, the combination of Whinnett et al. and Hiroshi does not disclose information transmitted in the common channel including a common code, a zero offset, a long code state, and a synchronous channel super from timing. Whinnett et al. also does not disclose obtaining a pseudo noise sequence zero offset timing base, the zero offset, the long code state, and the synchronous channel super frame timing. Whinnett et al. further does not disclose the common channel being synchronized with the starting point of a pilot channel of the synchronous base station.

The applicant's discussion of Prior Art of the Invention discloses "for the handoff, a synchronization of the pilot signal, offsets of the base station, a super frame timing of a synchronous channel and a long code state of a traffic channel should be obtained" (**See page 8 lines 6-9 of the applicant's disclosure**). The applicant's discussion of Prior Art of the Invention also discloses "in order to minimize a cell disconnection time, the mobile station can obtain the synchronization of the pilot signal, the offsets of the base station, the super frame timing of the synchronous channel and the long code state of the traffic channel during compressing mode" (**See page 8 lines 9-13 of the**

applicant's disclosure). Obtaining the synchronization of the pilot signal, the offsets of the base station, the super frame timing of the synchronous channel and the long code state of the traffic channel during compressing mode has the advantage of minimizing a cell disconnection time (**as suggested by the prior art section of the applicant's disclosure).**

It would have been obvious to one of ordinary skill of the art at the time of the invention to combine obtaining the synchronization of the pilot signal, the offsets of the base station, the super frame timing of the synchronous channel and the long code state of the traffic channel during compressing mode as suggested by the applicant's discussion of Prior Art of the Invention with the handoff method of the combination of Whinnett et al. and Hiroshi, with the motivation being to minimize a cell disconnection time.

6. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. in view of Hiroshi as applied to claims 1 and 8 above, and in further view of Wiedeman (U.S. Pat. 6654357).

With respect to claims 7 and 14, the combination of Whinnett et al. and Hiroshi does not disclose the long code state and the synchronous channel super frame timing being N-ary modulated.

Wiedeman, in the field of communications, discloses using N-ary, 128-ary, modulation to send the long code state and synchronous channel super frame timing (**See column 10 lines 62-67 in Wiedeman for reference to sending long code and**

zero offset timing information using a 128-ary modulator). Using N-ary modulation has the advantage of keeping all signals orthogonal to each other and providing an efficient use of bandwidth.

It would have been obvious to one of ordinary skill of the art at the time of the invention, when presented with the work of Wiedeman, to combine the use of N-ary modulation, as suggested by Wiedeman, with the handoff method of the combination of Whinnett et al. and Hiroshi, with the motivation being keep all signals orthogonal to each other and provide an efficient use of bandwidth.

Allowable Subject Matter

7. Claims 5, 6, 12, and 13 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
8. The following is a statement of reasons for the indication of allowable subject matter: Claims 5, 6, 12, and 13 are allowable over the prior art of record since the cited references taken individually, or in combination, fail to particularly disclose storing one period of the common channel, accumulating an output value of the common channel at every period, thereby generating accumulated values, and selecting a maximum value of the accumulated value. It is noted that the closest prior art Whinnett et al. shows a method of handoff between a CDMA system and a TDMA system. However, Whinnett et al. fails to disclose or render obvious the above underlined limitations as claimed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tiedemann, Jr. et al. (U.S. Pat. 5870427) discloses a method of handoff between a CDMA and a TDMA system. Czaja et al. (U.S. Application 09/314987) discloses a method of handoff between an IS-95 system and a CDMA2000 system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E Mattis whose telephone number is (703) 305-8702. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (703) 305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER